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Wireless Information Meter

FIELD OF THE INVENTION

The present invention is the first meter made that can be mounted on an engine or motor and be able to pick up signal with out the use of any wires to receive the data and then display it or store the date in memory for recall. All other meter require lead wire to be connected to the meter, but Paul's Wireless information meter does not require any wires at all, it is wireless.

Mr. Paul Crunk conceived the idea of having a wireless meter late 1997 that would keep track of service hours, the RPM and any other data required by the end user or manufacturer of a product.
Mr. Crunk has been working on this project since then and has finally come up with fully working meter as of August 31, 2001

Background of the invention:

A wireless information meter they could be used on gasoline, diesel, electric motors or any electrical application to record data of hours or use, RPM or any other data required, which can be used
by the end user or the manufacturer of that product to be able to keep track of the running operation of any gasoline or electrical product in more detail.

This wireless service meter could just keep track of rpm and hours or just keep track of service hours depending on which model a customer required and features needed for the application of use. The applications of use are endless. Some of the applications of use are furnaces, air-conditioners, water pumps, compressors, electrical usage on equipment, hours the equipment is being used and service alarms that alert the users of the equipment that service time and 1 or more service timers, plus eight rpm feature which can operate off of inductive pickup or be able to receive a pulse signal through a standard electrical wire. These service timers on the wireless meter could also be activated by receiving energy being produced by most standard electrical

devices being used on 110 volts through 240 volts D.C. or AC power. At this present time in the electrical market on many pieces of equipment including motors air-conditioners furnaces and many heating and cooling equipment there is no such recording device attached to the product. Many have said that is hard to do service on bearings or customers being able to set up some type of service interval to be able to apply lubrication or grease to bearings on many electrical equipment applications. They also have mentioned they would like to have a way of knowing how many hours and at what rpm the motor was operated at and be able to get this information from the meter and download into a laptop computer directly at the site or via telecommunications equipment by a person from a remote location tracking many pieces of equipment nationwide or international.

Paul Crunk has been working on this project for the last 5 years and now has invented Wireless information meter. The meter is able to receive a pulse signals, inductive signals or RF via the air or thought a metal structure or electrical non-engine wire application to where the meter is mounted thereto. The meter does not have to be mounted in the area of the engine or electrical to be able to operate. The meter can be able to display hours and minutes and engine RPM. The meter can use a digital or analogue display. The meter can be set up to be able to store all data for recall at a later date and then read through a portable PC, hand held reader, palm pilot or direct from the meter digital display. The meter is able to have an internal or external antenna Drawing 1 #1,#2, #3 on the exterior of the meter. The external antenna can at times make direct contact with the metal structure for better reception of the signal of that engine only and No false signals from other engines nearby.

Paul's wireless maintenance meter is the first of its kind, because all other meters require some sort of wire or cable to bring the information or signal to the meter. Also the other meters need to be within 2-6 inches of the spark plug and the wire must be attached to the meter out case in some way and the other end

must be attached to a spark plug wire so it can operate and display the information to the user. Most users would like the meter placed a distance from the source and not require any sort of wires needing to be attached to a spark plug wire, spark plug, engine kill wire, engine ignition system or an electrical AC wire source for it to be able to operate the meter.

Paul's wireless meter can be placed over 3 inches to over 6 feet away form the source the engine or motor and is able to receive the signal from the engine to the point of where the meter is mounted.

Some week signal engines will require a lead wire from the spark plug wire to be connected to a metal structure frame to help transfer the signal into the equipment being used.

DESCRIPTION OF DRAWINGS

The Wireless maintenance meter can be mounted on a metal bracket Drawing 2 #10 or on a plastic bracket with an antenna built into or on the plastic bracket. Problems with wireless has been that when water makes direct contact with the external antenna or the meter, the meter hour meter will keep running. I also have found that by mounting the meter into a special designed plastic bracket and at the proper distance and antenna at a certain length and running it a certain angle and at proper distance from the metal surface adding filters etc to meter it was able to receive and record the data in the meter accurately at over 6 feet away See Drawing 3 #10 and #11

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

I have done a patent search on the web and do not find any wireless tachometers or service meters that can be attached to equipment etc that does not require wires to be attached to the meter in some way.

My wireless meters does not require ANY wires to power it or make it function.

My wireless meter can be also powered by the engine kill wire, AC/DC voltage of .05 volts and up or can run directly from the internal lithium battery. The wireless meter can be set up with our standard auto switching circuit if customers require meters to have it for external power applications which the wish not to have an internal battery. The meter can also run directly off external power with out the use on the internal battery and be able to keep all recorded data stored in the meter for later recall. The meter can come in any size to meet any application or customer designs. The meter can display run-time, total-time; any number of service timers and can also keep track of other data required. The meter can count up or down and it can display RPM in actual run time and display highest RPM or average RPM, or lowest RPM or can turn off a circuit or motor or engine if rpm exceeds a certain level. The meter can be also set up to receive date sent from a transmitter to set up or clear any data from memory or retrieve from memory the information like water temp, head temp, oil pressure or any other data needed without having to be present or the use of any wires.

The major thing about this type of meter is it is able to operate and display without the use of any wires at all and can be placed at great distances from the engine or electrical motor.